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Case Note

Extending the Application of the ICJ's July 8, 1996, Advisory Opinion to Environment-Altering
Weapons In General: What Is the Role Of International Environmental Law In Warfare?

Deborah L. Houchins

25 Jan 2002

Hailed as “the most important opinion by a court in the history of the world,”¹ the International Court of Justice (ICJ), in its July 8, 1996 Advisory Opinion, (Advisory Opinion) “ruled that the use or threat of use of nuclear weapons is subject to the rules of international law applicable to armed conflict and to the rules of humanitarian law, which nuclear weapons cannot satisfy.”² In drafting the Advisory Opinion, the ICJ focused on a variety of issues, including an unprecedented consideration of environmental provisions and treaties. Under the ICJ’s Advisory Opinion, because nuclear weapons do not specifically limit their effects to a targeted enemy, but instead affect the world indiscriminately, nation-states implementing those weapons must consider carefully consider their use. That consideration should not be limited to nuclear weapons, but should also apply to any weapons systems designed to influence one’s enemy by changing the environment of their homeland or of the surrounding battlefield. These systems, termed “environment-altering weapons,”³ include nuclear and biological weapons, or any weapons system that causes “environmental modification.”⁴

¹ Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8).

² *Id.*; see also, ANN FAGAN GINGER, *A Court Opinion to Help Change the Course of History, in* NUCLEAR WEAPONS ARE ILLEGAL: THE HISTORIC OPINION OF THE WORLD COURT AND HOW IT WILL BE ENFORCED 1 (Ann Fagan Ginger ed., 1998).

³ The term “environmental-altering weapons” will be used throughout this note to refer to any weapons system designed to influence an enemy by changing the environment of their homeland or of the surrounding battlefield.

⁴ “The Second Indochina War demonstrated that, already by the 1970s, the arsenals of advanced nations included such environmental modification techniques as defoliation, rainmaking, and massive plowing. Far more disruptive weaponry may have been developed since, and certainly has been envisioned.” Christopher D. Stone, *The Environment in Wartime: An Overview, in* THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES 17-18 (Jay E. Austin and Carl E. Bruch eds., 2000) (citation omitted).

Change in the international arena over the last several years demands that the laws applying to environment-altering weapons be contemplated not only by nation-states, but by groups and individuals seemingly beyond the reach of any single government body. For example, according to former Secretary of the Air Force Verne Orr, “[f]uture warfare may not exist in the traditional sense. It may be nothing more than well-organized and coordinated terrorism, perpetrated by highly dedicated and heavily armed terrorists on a mass scale.”⁵ In proposing a foundation for reconciling the Advisory Opinion with the threats of modern warfare, the international community must: (1) understand the foundation for ICJ authority; (2) contemplate the cornerstones of international environmental law; (3) grasp the nature of the weapon systems to which this law will apply; (4) explore the nature of past applicable international laws, treaties and past ICJ decisions; and finally, (5) test the application of current international environmental law to the abstract concept of environment-altering weapons.

I. BACKGROUND

Understanding the legal opinions involved in this analysis requires a working understanding of the legal system from which it is derived. The ICJ, also known as the “World Court,” stands as a particularly strong international organization.⁶ The court’s development and role in the United Nations (“UN”), as well as its structure, and the binding authority of ICJ decisions generally predicates that sentiment.

A. The International Court of Justice

⁵ STEPHEN SLOAN, BEATING INTERNATIONAL TERRORISM: AN ACTION STRATEGY FOR PREEMPTION AND PUNISHMENT 20 (2000) (quoting Verne Orr, *Perspectives on Leadership*, 36 AIR UNIV. REV. 53 (1985)).

⁶ INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 213.

The ICJ is fairly young in its development as the principle judicial body for the UN. The ICJ was preceded by the Permanent Court of International Justice (PCIJ) which was established in 1922.⁷ The PCIJ received its power in accordance with article 14, of the Covenant of the League of Nations, and functioned “in addition to the Court of Arbitration organized by the Conventions of The Hague of 1899 and 1907, and to the special Tribunals of Arbitration to which States are always at liberty to submit their disputes for settlement.”⁸ The ICJ replaced the PCIJ on April 18, 1946⁹ when the UN created its new charter specifically establishing the ICJ as the UN’s principal judicial organ.¹⁰ Additionally, the UN passed the Statute of the International Court of Justice (Statute of the ICJ) which defines the ICJ’s jurisdiction, and was modeled after the Statute of the PCIJ.¹¹

Under the Statute of the ICJ, there are fifteen elected independent judges and “no two [judges] may be nationals of the same state.”¹² The nation where one ordinarily exercises one’s

⁷ COLUMBIA ENCYCLOPEDIA (6th ed. 2001), *available at* <http://www.bartleby.com/65/wo/WorldCrt.html> (last accessed March 22, 2002).

⁸ Republic of Turkey Ministry of Foreign Affairs, *Statute of the Permanent Court of International Justice*, *available at* <http://www.mfa.gov.tr/grupe/ed/eda/eda15e.htm> (last accessed Jan. 12, 2002).

⁹ MANUAL ON INTERNATIONAL COURTS AND TRIBUNALS 4 (Philippe Sands et al., 1999).

¹⁰ U.N. CHARTER art. 92 *available at* <http://www.icj-cif.org/icjwww/basicdocuments/basictext/basicuncharter.htm> (last accessed Jan. 8, 2002).

¹¹ *Id.*

¹² International Court of Justice, *Statute of the International Court of Justice* art. 3(1) *available at* <http://www.icj-cij.org/icjwww/basicdocuments/basictext/basicstatute.htm> (last accessed Jan. 8, 2002).

civil and political rights determines a judge's nationality.¹³ In addition, ICJ judges must be "of high moral character, who possess the qualifications required in their respective countries for appointment to the highest judicial offices, or are jurisconsults of recognized competence in international law."¹⁴ Where the ICJ hears a case, and the ICJ does not include a judge on the bench that represents the nationality of a party, an ad hoc judge may be appointed for that case.¹⁵

B. The United Nations

The objectives embodied in the UN charter define the organization's power over world-oriented concerns. Under Article 1 of the charter, the UN has four primary purposes:

1. To maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace;
2. To develop friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, and to take other appropriate measures to strengthen universal peace;

¹³ *Id.* at art. 3(2).

¹⁴ *Id.* at art. 2.

¹⁵ If a party to a case before the court does not have a judge of its nationality on the bench, it may appoint an ad hoc judge to sit in the case. Ad hoc judges must meet the same service requirements as the permanent judges and they participate in the deliberations of the court on terms of full equality with the other judges. An ad hoc judge may be of nationality other than that of the appointing party, but should preferably be chosen from those persons who were previously nominated as candidates to serve in the ICJ. . . . If both states parties are entitled to appoint ad hoc judges, one of the parties may propose to the other that they both abstain from appointing them.

3. To achieve international co-operation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion;
4. To be a centre for harmonizing the actions of nations in the attainment of these common ends.¹⁶

The UN Charter further mandates that the UN achieve its objectives in an atmosphere of “sovereign equality” and respect for “good faith . . . obligations.”¹⁷ Because the ICJ exists as an organ of the UN, the authority of the ICJ extends from the same objectives as its parent organization.

The rules of war, both those regulating execution and those governing declarations of war, fall within the scope of the UN charter. As John Burroughs points out:

Articles 2(4) and 51 of the United Nations Charter state the main rules governing when a state can resort to war, traditionally known as the *jus ad bellum*, as contrasted with the rules governing conduct of warfare, the *jus in bello*, most importantly, humanitarian law. Essentially they provide that a state may engage in war only in collective or individual self-defence, and then only when the Security Council has not exerted control.¹⁸

Although the text of the UN charter does not specifically grant the UN power to regulate environment-altering weapons, this power may fairly be assumed under the Charter’s preamble

¹⁶ U.N. CHARTER art. 1 *available at* <http://www.icj-cif.org/icjwww/ibasicdocuments/ibasictext/ibasicuncharter.htm> (last accessed Jan. 8, 2002).

¹⁷ *Id.* at art. 2(1)-(2).

¹⁸ JOHN BURROUGHS, THE LEGALITY OF THREAT OR USE OF NUCLEAR WEAPONS: A GUIDE TO THE HISTORIC OPINION OF THE INTERNATIONAL COURT OF JUSTICE 38 (1998).

that empowers the UN to “maintain international peace and security [while ensuring that] . . . armed force shall not be used, save in the common interest.”¹⁹

C. Authority of the International Court of Justice

The role of the ICJ as an organ of the UN involves a unique jurisdiction. ICJ jurisdiction has regularly influenced world politics since its inception, with the court rendering “67 judgments in contentious cases and 24 Advisory Opinions” since 1946.²⁰ Included in that jurisdiction is the court’s authority to settle disputes over its own jurisdictional reach.²¹ Recognizing that the court supplanted the PCIJ, the ICJ and its applicable statutes supercede any treaties or conventions granting power to the PCIJ, or to tribunals instituted by the League of Nations.²²

Generally speaking, the ICJ implements two paths of jurisdiction:

It may receive any legal dispute referred to it by states for settlement in accordance with international law and it may render advisory opinions on legal questions presented to it by the General Assembly and Security Council of the United Nations and other duly authorised UN organs and specialised agencies.²³

¹⁹ U.N. CHARTER preamble *available at* <http://www.icj-cif.org/icjwww/ibasicdocuments/ibasictext/ibasicuncharter.htm> (last accessed Jan. 8, 2002).

²⁰MANUAL ON INTERNATIONAL COURTS AND TRIBUNALS, *supra* note 9, at 4.

²¹ International Court of Justice, *Statute of the International Court of Justice* art. 36(6), *available at* <http://www.icj-cij.org/icjwww/ibasicdocuments/ibasicdex/ibasicstatute.htm> (last accessed Jan. 8, 2002).

²² International Court of Justice, *Statute of the International Court of Justice* art. 37, *available at* <http://www.icj-cij.org/icjwww/ibasicdocuments/ibasicdex/ibasicstatute.htm> (last accessed Jan. 8, 2002).

²³MANUAL ON INTERNATIONAL COURTS AND TRIBUNALS, *supra* note 9, at 4.

Under article 36(1), entitled "Statute of the ICJ," the court's power extends to "all cases which the parties refer to it and all matters specially provided for in the Charter of the United Nations or in treaties and conventions in force."²⁴ Thus, ICJ authority may apply where a given treaty provision outlines jurisdiction²⁵ or two states in opposition to each other accept such coverage.²⁶ The ICJ may also bind states who are not one of the 185 members party to the Statutes of the ICJ, where those states join the Statute or participate in cases ad hoc before the Court.²⁷ Further, where the ICJ exercises jurisdiction, unconditionally or otherwise, that jurisdiction may address "a. the interpretation of a treaty; b. any question of international law; c. the existence any fact

²⁴ International Court of Justice, *Statute of the International Court of Justice* art. 36(1) available at <http://www.icj-cij.org/icjwww/ibasicdocuments/ibasicdex/ibasicstatute.htm> (last accessed Jan. 8, 2002).

²⁵ It has long been a general practice among States to include in international agreements, be they bilateral or multilateral, provisions known as compromissory clauses. These clauses provide for reference of disputes emanating from the interpretation or application of the treaty in question to certain methods of pacific settlement. As noted earlier, many treaties contain arbitral clauses or references to forms of mediation or conciliation. Nowadays, recourse to the ICJ is one of the more common provisions, either as a direct method of settlement or after the exhaustion of other means.

ARTHUR EYEFINGER, *THE INTERNATIONAL COURT OF JUSTICE* 127 (Kluwer Law International 1996).

²⁶ WEST'S ENCYCLOPEDIA OF AMERICAN LAW, <http://www.wld.com/conbus/weal/wintl1aw.htm> (last visited Mar. 24, 2002).

²⁷ Certain conditions apply to countries seeking qualified membership under the ICJ. Currently, only Nauru and Switzerland have exercised this option and become parties to the ICJ's statute without being members of the UN. See MANUAL ON INTERNATIONAL COURTS AND TRIBUNALS, *supra* note 9, at 4.

which, if established, would constitute a breach of an international obligation; [or] d. the nature or extent of the reparation to be made for the breach of an international obligation.”²⁸

The ICJ may assert advisory jurisdiction upon request of an authorized organ of the United Nations. The court is then authorized to render an advisory opinion on any “legal questions arising within the scope of [the requesting organ’s] activities.”²⁹ Currently, the General Assembly authorizes nineteen agencies, in addition to the General Assembly or the Security Council under article 96 of the Charter of the United Nations, to request advisory opinions.³⁰ Queries to the ICJ must be written statements of the exact question to be answered, and include

²⁸ International Court of Justice, *Statute of the International Court of Justice* art. 36(2)-(3) available at <http://www.icj-cij.org/icjwww/ibasicdocuments/ibasicdex/ibasicstatute.htm> (last accessed Jan. 8, 2002).

²⁹ U.N. CHARTER, ART. 96(2).

³⁰ The following organs and agencies are at present authorised to request advisory opinions:

. . . Economic and Social Council; Trusteeship Council; Interim Committee of the General Assembly; International Labour Organisation; Food and Agriculture Organisation of the United Nations; United Nations Educational, Scientific and Cultural Organisation; World Health Organisation; International Bank for Reconstruction and Development; International Finance Corporation; International Development Association; International Monetary Fund; International Civil Aviation Organisation; International Telecommunications Union; International Fund for Agricultural Development; World Meteorological Organisation; International Maritime Organisation; World Intellectual Property Organisation; United Nations Industrial Development Organisation; International Atomic Energy Agency.

all documents likely to illuminate the issue.³¹ Question specificity affects the scope of the court's final opinion and may influence future power of the court.³²

The ICJ's authority binds "[a]ll 185 members of the UN [that] are parties to the Statute of the ICJ. . . [that] may bring cases to the court."³³ Moreover, a State may preordain ICJ authority instead of consenting to jurisdiction, or relying on treaty provisions to declare jurisdiction over a certain matter.³⁴ Under article 36, paragraph 2, of the Statute of the ICJ (also known as the "optional clause"), a country may consent to compulsory ICJ jurisdiction.³⁵ As of 1996, only 60 of the 186 States party to the UN consented to the optional clause.³⁶ The United States has not agreed to such jurisdiction.³⁷ Instead, the United States has invoked the Connally Reservation to avoid ICJ jurisdiction.³⁸ Further, "[i]n 1986, the United States terminated its acceptance of the

³¹ International Court of Justice, *Statute of the International Court of Justice* art. 65(2) available at <http://www.icj-cij.org/icjwww/basicdocuments/basictext/basicstatute.htm> (last accessed Jan. 8, 2002).

³² International Court of Justice, *Nuclear Tests Case (New Zealand v. France)*, available at <http://www.icj-cij.org/icjwww/basicdocuments/basictext/basicstatute.htm> (last accessed March 22, 2002).

³³ MANUAL ON INTERNATIONAL COURTS AND TRIBUNALS, *supra* note 9, at 4.

³⁴ WEST'S ENCYCLOPEDIA OF AMERICAN LAW, <http://www.wld.com/conbus/weal/wintllaw.htm> (last visited Mar. 24, 2002).

³⁵ EYEFINGER, *supra* note 25, at 130.

³⁶ *Id.*

³⁷ *Id.* at 131.

³⁸ This reservation allows States a way out of the court's jurisdiction previously accepted under the Optional Clause if they decide not to respond to a particular suit. It is commonly exercised when a State determines that a particular dispute is of domestic rather than international character and thus domestic jurisdiction applies. If a State invokes the self-judging reservation, another State may also

court's jurisdiction under the Optional Clause after the U.S. government became dissatisfied with U.S.--Nicaragua litigation."³⁹ As a result, the ICJ's jurisdiction over the United States emanates from the country itself bringing suit in the ICJ, or from treaty agreements to which the United States is a party that bind the treaty's subject matter to the power of the court.⁴⁰

D. International Law and the ICJ

The framework for ICJ opinions demands an operational understanding of international law and international environmental law. International law developed over many centuries from a complex unification of Western and Eastern principles.⁴¹ It is defined as the "set of norms that

invoke this reservation against that State and thus a suit against the second State would be dismissed. This is called the rule of reciprocity and stands for the principle that a State has to respond to a suit brought against it before the ICJ only if the State bringing the suit has also accepted the court's jurisdiction.

WEST'S ENCYCLOPEDIA OF AMERICAN LAW, <http://www.wld.com/conbus/weal/wintllaw.htm> (last visited Mar. 24, 2002).

³⁹ *Id.*

⁴⁰ "Nonetheless, the United States is still a party to many treaties and has consented to the court's jurisdiction with regard to certain treaties automatically because it is a party to these treaties, under article 36(1)." *Id.*

⁴¹ What a majority of modern writers regard as international law began to differentiate from a universalistic public law in the West about 600 years ago. Politically, after the Roman city-state that became an empire withered away, segments of the old imperium began to see themselves as entities, not as mere extensions of a king's domain. These discrete new entities, despite Louis XIV's famous statement of identity between himself and the State, were incorporeal and distinct from any monarch. Certainly by the time of Ferdinand and Isabella--and probably at least one hundred years earlier--the nation-state as we know it today (territory, population, government) was in being in the West.

These entities soon evolved standards of conduct toward each other beyond the rules of etiquette between monarchs. Some of these were and still are

governs the interaction between nation-states . . . international law is largely if not exclusively made by states and reflects their will and consent.”⁴² The rights and obligations under international

standards of political propriety, such as diplomatic protocol, principles of international relations and comity. Other standards of conduct—always minimum ones—came to be thought of as creating rights and obligations for states, analogous to the rules (or norms) that States themselves imposed on persons within their jurisdiction, not as whim or caprice but as law. Specifically, the part of Roman law that pertained in the heyday of Roman authority to controversies between non-Romans, the *jus gentium*, became a term used yesterday, and in some measure still, to refer to “customary international law.”

The international law of today does not show distinct linkages to ancient Oriental and African practices. Even the modern descendants of very old Oriental cultures accept international law as the product of Western evolution. Ignorance and neglect in the West of the history of law and related institutions in the East constitute the most likely explanation of this omission. Scholars in some of the modern States that have evolved from the Oriental historical matrix sometimes chide the West for this inattention and threaten (usually mildly) to set the matter aright sometime. New States in Africa sometimes are heard in similar vein.

This fact makes the existing international legal system somewhat vulnerable to attacks on its universality by States not present at its creation. Most often, however, the States that are not satisfied with the existing order attack specific rules or principles, not the system. Classical, scholarly Marxists, and many who are non-Marxist, deprecate the system of customary international law because it seems to them unavoidably to state, as law, rules and principles fostering the interests of the power elites asserting them. The socialist States of the former Second World, however, came in practice to accept the system and many of its most conventional rules and principles, while selectively seeking to deny status as law to other rules and principles because they are contradictory to national ideological or other preferences.

CHRISTOPHER L. BLAKESLEY ET AL., *THE INTERNATIONAL LEGAL SYSTEM* 1431-1432 (5th ed. 2001).

⁴² *INTERNATIONAL ENVIRONMENTAL LAW AND POLICY* *supra* note 6, at 171.

law govern not only nation-states, but also international governmental and non-governmental organizations.⁴³

The ICJ applies international law as the standard in deciding cases before it. Specifically, the ICJ uses international law, in the sense that “[i]t applies international treaties to which the states before it are parties, international customary law and general principles of the law.”⁴⁴ Ancillary to determining the law, the ICJ may also employ a variety of judicial tools such as precedent from different countries, writings by distinguished international jurists, or even equitable remedies where authorized by the parties involved.⁴⁵

Because the environment is an international concern, principles of international environmental law, based on international law, are developing. However, “[o]nly a very few international courts exist that have competence for disputes between states relating to the environment.”⁴⁶ The ICJ is one of these courts. Thus, “in anticipation of more environmental cases, the [ICJ] established . . . a seven-judge Chamber for Environmental Matters.”⁴⁷

II. *Advisory Opinion: “Is the threat or use of nuclear weapons in any circumstance permitted under international law?”*

⁴³ *Id.*

⁴⁴ MANUAL ON INTERNATIONAL COURTS AND TRIBUNALS, *supra* note 9, at 5.

⁴⁵ *Id.*

⁴⁶ INTERNATIONAL ENVIRONMENTAL LAW AND POLICY, *supra* note 6, at 213.

⁴⁷ *Id.* at 1174 (app. II).

The ICJ has only recently begun to turn its attention to environmental issues. Thus, the area is ripe for judicial interpretation.⁴⁸ Because the ICJ has not yet spoken on issues of environmental impact regarding weaponry used during war, arguably the notions presented in this Advisory Opinion provide a foundation for understanding environmental responsibility and weapons implementation. For example, the ICJ's reliance on specific treaties supports such a broad interpretation.

A. Understanding Environmental Altering Weapons

The phrase "environment-altering weapons" may include a vast and varied range of weapons systems. Any weapon that alters an environment in some way would fit as an environment-altering weapon. As a result, the potential class of weapons systems includes not just weapons of mass destruction, like nuclear weapons, but also extends to less destructive weapons, such as weather changing devices and microbial systems designed to consume resources necessary for war-fighting (like fuel). However, despite the potential range of includable weapons systems, this Note focuses on the most predominant systems, that is nuclear, biological, and chemical weapons.

1. Nuclear Weapons

One of the strongest underlying bases for the ICJ's Advisory Opinion was the reported effects of nuclear weapons on human beings. In prior debates before the ICJ, the Solomon Islands submitted a statement a declaration by radiation physicist and biologist Joseph Rotblat who asserted "that in addition to the initial blast, heat, and radiation effects of nuclear war, the long-

⁴⁸ INTERNATIONAL ENVIRONMENTAL LAW AND POLICY, *supra* note 6, at 213.

term radiation effects would be global in scope, increasing the incidence of cancer and genetic defects.”⁴⁹ Other theorists, in contemplating the international laws of war and nuclear weapons, have made similar assessments. According to Adam Roberts, “[a]ny massive exchange of nuclear weapons would utterly destroy the environment, as well as a great deal else.”⁵⁰ Thus, the ability of nuclear weapons to leave a clear and devastating footprint on the biosystem should be addressed.

In tune with the concerns voiced by Rotblat and Roberts, the Advisory Opinion recognized that a consideration of nuclear weapons had to extend to the “uniqueness” of nuclear energy as a weapon. The ICJ determined that:

The radiation released by a nuclear explosion would affect health, agriculture, natural resources and demography over a very wide area. Further, the use of nuclear weapons would be a serious danger to future generations. Ionizing radiation has the potential to damage the future environment, food and marine ecosystem, and to cause genetic defects and illness in future generations.⁵¹

2. Biological Weapons

Biological weapons constitute a formidable group of wartime implements. These weapons use infectious living organisms to cause incapacitation and death to the targeted opponents.⁵² An effective instrument of mass death, biological weapons produce “slow-acting effects [that]

⁴⁹ BURROUGHS, *supra* note 18, at 19 (1998).

⁵⁰ ADAM ROBERTS, *The Law of War and Environmental Damage*, in THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES, *supra* note 4, at 78.

⁵¹ *Id.* at 20.

⁵² Barry Kellman, *Bridling the International Trade of Catastrophic Weaponry*, AM. U. L. REV. 755, 763 (1994).

resemble natural maladies, making it difficult for the victim to attribute damage to an enemy.”⁵³

Due to the “unpredictable” nature of biological weapons⁵⁴ and their clear environmental footprint, short term use of such weapons on the battle field is limited.⁵⁵ In the long run, however, these weapons present a larger environmental concern.

Most nations, and likely many individuals and organizations, could likely produce some form of biological weapon. Granted, “[d]eveloping and producing reliable weapons based on infectious agents requires commitments of large technical resources and poses serious performance drawbacks.”⁵⁶ However, primitive weapons with limited reliability could easily be constructed⁵⁷ without great cost. For example, “[a] well-equipped microbiological laboratory comparable to those in many modern hospitals can produce large quantities of agents from infectious strains of microorganisms.”⁵⁸

3. Chemical Weapons

⁵³*Id.* at 764; *see also id.* at 763 (“[B]iological weapons have advantages as small-scale, covert terrorist weapons”).

⁵⁴*Id.* at 763.

⁵⁵ Biological weapons “have limited battlefield utility though their effects can be short-lived and indiscriminate. Strategically they do have some potential, but contagious diseases or contaminated water supplies would pose extreme problems for any conventional follow-on attack. . . . The greatest threat biological weapons pose is as a terror weapon.” RICHARD A. PAULSEN, *THE ROLE OF US NUCLEAR WEAPONS IN THE POST-COLD WAR ERA* 120-121 (1994).

⁵⁶Kellman, *supra* note 52, at 764.

⁵⁷*Id.*

⁵⁸*Id.* at 763.

Chemical weapons involve the delivery of a chemical or combination of chemicals into the environment without degrading structures in the area.⁵⁹ Generally, “[c]hemical weapons are more suited for battlefield use than biological weapons are, since military personnel can control their effects and distribution to a greater degree.”⁶⁰ The “negligible destructive capability” of chemical weapons creates a battlefield advantage over those systems that leave a more costly and destructive footprint⁶¹, such as nuclear weapons.⁶² For example, “if the military objective is to subjugate a nearby rebellious population, chemical weapons have a sharp advantage over nuclear bombs.”⁶³ With this effectiveness in mind, subsequent employment of chemical weapons, despite international efforts to ban chemical weapon use,⁶⁴ comes as little surprise.

B. Why the Advisory Opinion in light of New Zealand v. France?

In 1974, the ICJ heard the case of *New Zealand v. France*.⁶⁵ New Zealand complained of France’s atmospheric testing of nuclear weapons in the South Pacific, the geographic area that

⁵⁹ “Indeed, the primary military utility of chemical weapons lies in their ability to annihilate unequipped adversary populations without harming roads, buildings, or physical infrastructure.” *Id.* at 762.

⁶⁰PAULSEN, *supra* note 55, at 121.

⁶¹ “[C]hemical and biological weapons are much easier to produce than nuclear weapons and have proved to be quite effective.” *Id.* at 118.

⁶² Kellman, *supra* note 52, at 762.

⁶³*Id.*

⁶⁴PAULSEN, *supra* note 55, at 118 (quoting *Global Spread of Chemical and Biological Weapons: Hearings before the Committee on Governmental Affairs and its Permanent Subcommittee on Investigations*, 101st Cong. 10 (1989) (statement of William H. Webster)).

⁶⁵ International Court of Justice, *Nuclear Tests Case (New Zealand v. France)*, available at <http://www.icj-cij.org/icjwww/ibasicdocuments/ibasictext/ibasicstatute.htm> (last accessed March 22, 2002).

included New Zealand. In response to New Zealand's concern, the government of France eventually issued a statement disavowing any plan to perform atmospheric testing of nuclear weapons after 1974. As a result of this and other circumstances, the ICJ, in a nine to six vote, determined that New Zealand's claim was no longer valid, and there was no need to resolve the issue. Because the ICJ did not resolve the issue between New Zealand and France, and because the original issue before the ICJ only reached atmospheric testing of nuclear weapons, the Advisory Opinion presents a novel issue before the ICJ regarding use of nuclear weapons in armed conflict.⁶⁶

While this opinion represents a good start, international law should clearly develop the rules of engagement for environment-altering weapons. A clear development may be achieved by (1) recognizing the opinion of the ICJ as international policy binding those subject to the UN; (2) recognizing the decision as representative of customary laws of war; and (3) expanding that understanding to include nation-state responsibility for environment-altering weapons in general.

C. International Law and Treaty Considerations

The ICJ compiled its Advisory Opinion in light of written and oral statements provided by States interested in the opinion's topic. Responding States included such nations as Bosnia and Herzegovina, Burundi, Germany, Ireland, the United Kingdom and Northern Ireland, the United States, and Egypt.⁶⁷ In formulating their arguments, many cited existing international treaties that involve environmental law. The ICJ specifically addressed references to the Additional Protocol I

⁶⁶ Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 1.

⁶⁷ Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 5.

of 1977 to the Geneva Conventions of 1949,⁶⁸ the Convention of 18 May 1977 on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (Environmental Modification Convention), the Stockholm Declaration of 1972 (Stockholm Declaration),⁶⁹ and the Rio Declaration of 1992 (Rio Declaration),⁷⁰ in formulating its response.⁷¹

1. Addition Protocol I of 1977 to Geneva Conventions of 1949

In discussing international tenets for environmental law, the Advisory Opinion specifically recognized article 35, paragraph 3, and article 55 of the Additional Protocol I of 1977 to the Geneva Conventions of 1949 (Additional Protocol I).⁷² In discussing these articles, the ICJ noted positions maintained by States responding to the ICJ on the issue proposed for the Advisory Opinion. There the ICJ recognized that some States “questioned the binding legal quality of these precepts of environmental law [such as the Additional Protocol I],”⁷³ and that “the principle purpose of environmental treaties and norms was the protection of the environment in time of

⁶⁸ International Committee of the Red Cross, *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)*, 8 June 1977 (last accessed Jan. 12, 2002) (hereinafter Additional Protocol).

⁶⁹ United Nations Conference on the Human Environment: Final Documents, June 16, 1972, 11 I.L.M. 1416 [hereinafter Stockholm Declaration].

⁷⁰ United Nations Conference on Environment and Development: Rio Declaration on Environment and Development, June 14, 1992, 31 I.L.M. 874 [hereinafter Rio Declaration].

⁷¹ *Id.* at para. 27.

⁷² Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 27

⁷³ *Id.* at para. 28.

peace.”⁷⁴ Some States felt that if environment-based treaties prohibited the use of nuclear weapons, such limitation would produce destabilizing effects in the realm of international law.⁷⁵

The ICJ asserted that the Additional Protocol I bound those who were a party to it.⁷⁶ Further, while the ICJ did not specifically decide whether the Additional Protocol, or any other environmental treaty provision cited by the ICJ, applied during war, it implied that environmental obligations may extend to war. For example, the ICJ considered a State’s obligations in war.⁷⁷ Certainly, “[t]he Court [did] not consider that the treaties in question could have intended to deprive a State of the exercise of its right of self-defence under international law because of its obligations to protect the environment.”⁷⁸ But the ICJ did not interpret that right to preclude a State’s environmental responsibilities.⁷⁹

In the case of the Additional Protocol I, obliging combating States to consider environmental responsibility under the Advisory Opinion conforms with the underlying interests of the treaty. As noted by the ICJ, the Additional Protocol I specifically provides for environmental

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.* at para. 31.

⁷⁷ *Id.* at para. 30.

⁷⁸ *Id.*

⁷⁹ “Nonetheless, States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives. Respect for the environment is one of the elements that go to assessing whether an action is in conformity with the principles of necessity and proportionality.” *Id.*

protection in war.⁸⁰ The treaty recognizes such protection as an interest in civilian objects, a reasonable conceptualization since the environment extends beyond the limits of the battlefield. In line with that conceptualization, article 51 of the treaty demonstrates the general interest in civilian welfare by the parties to the treaty.⁸¹ Finally, under article 35, the general methods and means of war precludes the use of weapons that extends beyond the objectives of war.⁸² This overarching interest in protecting civilians despite the onslaught of war implies that the effects on one are not mutually exclusive from affecting the other, and harmonizes with the ICJ's declaration of environmental responsibility beyond peacetime activities.

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- ⁸⁰ (1) Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damages to the natural environment and thereby to prejudice the health or survival of the population.
- (2) Attacks against the natural environment by way of reprisals are prohibited.

ADDITIONAL PROTOCOL *supra* note 68, at art.55.

⁸¹ "The civilian population and individual civilians shall enjoy general protection against dangers arising from military operations. To give effect to this protection, the following rules, which are additional to other applicable rules of international law, shall be observed in *all* circumstances."

Id. at art. 51, para 1.

- ⁸² Article 35. Basic rules
1. In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.
 2. It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.
 3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.

ADDITIONAL PROTOCOL *supra* note 68.

*2. Convention of May 18, 1977 on the Prohibition of Military or Any Other Hostile Use of
Environmental Modification Techniques*

Some States argued that the Environmental Modification Convention would ban the use of nuclear weapons. States noted that the convention “prohibit[ed] the use of weapons which have ‘widespread, long-lasting or severe effects’ on the environment.”⁸³ However, the ICJ did not use this Environmental Modification Convention in the analysis of the Advisory Opinion.

Certainly, the Environmental Modification Convention directly addresses the primary consideration for the ICJ (whether a weapon materially influences the environment, where that weapon is a legal tool in war under international law). Article I binds States “not to engage in military or any other hostile use of environmental modification techniques.”⁸⁴ Article II generally defines what such techniques would include.⁸⁵ Further, as recognized in the Preamble, “scientific and technical advances may open new possibilities with respect to modification of the environment . . . [which if the international community permitted military or hostile use of those techniques] could have effects extremely harmful to human welfare.”⁸⁶ A ban on such activities logically follows.

⁸³ Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 27 (quoting Environmental Modification Convention—source provided did not include citation information.)

⁸⁴ Article I, Convention On The Prohibition Of Military Or Any Other Hostile Use Of Environmental Modification Techniques (May 18, 1977).

⁸⁵ *Id.*; see generally *id.* at art. II.

⁸⁶ *Id.* at Preamble.

However, the Environmental Modification Convention does not foreclose the opportunity for a State to defend itself during conflict. A complete ban on all related weapons arguably would countermand international law. In short, because the language in Article I prohibits only those techniques with “widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party,” State warfare objectives can still be achieved by less devastating means than nuclear weapons.⁸⁷

3. Stockholm Declaration of 1972

Some States argued that under Principle 21 of the Stockholm Declaration, States had specific environmental duties that precluded the use of nuclear weapons.⁸⁸ Although the ICJ did not specifically apply Principle 21, the principle itself harmonized with the final position held by the ICJ in its opinion.

Principle 21 specifically states:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.⁸⁹

Under Principle 21, States’ arguments seem to rely on the understanding that nuclear weapons cannot be restricted to a single area, but pervasively enter the environment. Where nuclear weapons could not be so controlled, States party to the declaration and using nuclear weapons would, by default, violate Principle 21. That position reflects the general theme of the declaration,

⁸⁷*Id.* at art. I.

⁸⁸ *Id.* at para. 27.

⁸⁹ Stockholm Declaration, *supra* note 69, at Principle 21.

that States have a duty to protect the environment for the “benefit of their [own] population”⁹⁰ as well as others, for “present and future generations,”⁹¹ and that liability may be assessed where environmental damage to others results from activities of a given State.⁹²

However, the Stockholm Declaration explicitly addressed the use of nuclear weapons under Principle 26. Though the tone of the Stockholm Declaration as a whole implies prohibition on the use of such weapons, as reiterated by the citing States, the language only recognizes the importance of protecting the environment from their effects.⁹³ Absent a direct obligation to dispose of nuclear weapons, the Principle seems to recognize that the decision to wield such a weapon requires a balance between consideration of the environment and allowing the State to defend themselves where necessary.⁹⁴

4. Rio Declaration of 1992

⁹⁰ *Id.* at Principle 13.

⁹¹ *Id.* at Principle 2.

⁹² *Id.* at Principle 22

⁹³ “Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.” *Id.* at Principle 26.

⁹⁴ The ICJ thus finds that while the existing international law relating to the protection and safeguarding of the environment does not specifically prohibit the use of nuclear weapons, it indicates important environmental factors that are properly to be taken into account in the context of the implementation of the principles and rules of the law applicable in armed conflict.

Finally, the ICJ commented on State reliance on the Rio Declaration. The United Nations Conference on Environment and Development produced the Rio Declaration after an eleven day meeting in Rio de Janeiro. The conference sought to reaffirm the Stockholm Declaration, itself a product of the United Nations Conference on the Human Environment.⁹⁵ The conference also worked toward:

[E]stablishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people . . . [developing] international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system, [and] Recognizing the integral and interdependent nature of the Earth⁹⁶

States cited Principle 2 as reiterating the common interest of the parties to recognize a State's duty to avoid injuring the environment of others.⁹⁷ The ICJ, however, discussed application of the Rio Declaration in terms of Principle 24: "Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary."⁹⁸ The ICJ cited that principle to support its aforementioned premise that

⁹⁵Annex I, Rio Declaration on Environment and Development (June 14, 1992).

⁹⁶*Id.*

⁹⁷ States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Rio Declaration *supra* note 70, at Principle 2.

⁹⁸ Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 30. (quoting Rio Declaration *supra* note 70, at Principle 24).

“environmental considerations [must be taken] into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives.”⁹⁹ Read in tandem with the Stockholm Declaration, the ICJ’s proposed balance of environmental consideration with military objectives reflects the U.N.’s underlying interest in supporting the environment without abridging State rights in armed conflict, as expressed under international law.

III. ANALYSIS AND IMPACT: A PROPOSAL - THE ICJ’S OPINION AS A SPRING-BOARD FOR OTHER ENVIRONMENTAL CONSIDERATIONS

War, arguably, exists as a common character trait for human society. For centuries, man conquered or succumbed to his enemies. Only recently has the environmental impact of war become an express consideration.¹⁰⁰ Because of social advancement, humanity today vocalizes its concern for the environmental effects of war on an international scale. Yet, that sudden interest only announces a modern day awareness of an issue as old as war itself, that “[t]he environmental impacts of wars are almost invariably adverse, regardless of whether they are caused by direct military actions or strategic counteractions, or collateral damages, or are the result of military

⁹⁹ *Id.*

¹⁰⁰ First, although military activities now contribute only about 3 percent to total human activities worldwide (as measured in terms of gross national products), every bit of ameliorative action is valuable in the increasingly dire environmental circumstances prevailing today. Second, some military activities have the potential for being environmentally disruptive at levels disproportionately high in relation to their contribution to overall human activities, thus requiring particular attention.

ARTHUR H. WESTING, *In Furtherance of Environmental Guidelines for Armed Forces During Peace and War*, in THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES, *supra* note 4, at 171 (citation omitted).

support activities before or after war.”¹⁰¹ Whether age old or a new discovery, human interest lends itself to development of an international legal standard, applicable not only to those weapon systems leaving an environmental footprint that international ICJs of law most commonly address, but to environment-altering weaponry in general.

International societies pursue their interest in war in general because modern society recognizes some degree of interconnectedness between nation-states. This interest is not new and originally was expressed in terms of the effects of war between those directly participating.¹⁰² Today, international interest is expressed in terms of our international political systems, for example, express UN interest in tracking war.¹⁰³

We are interested in the environmental effects of war because developments around the world have given rise to complex issues that require legal responses. According to the ICJ, all nation-states, at all times, exist collectively within one environment which “represents the living space, the quality of life and the very health of human beings, including generations unborn.”¹⁰⁴ Such interconnectedness breeds concern for the acts of those around us, as they affect our own

¹⁰¹ ASIT K. BISWAS, *Scientific Assessment of the Long-Term Environmental Consequences of War*, in THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES, *supra* note 4, at 303.

¹⁰² Hugo Grotius, a political theorist preceding von Clausewitz, “rested his appeal for moderation less on environmental consciousness than on prudent self-interest.” CHRISTOPHER D. STONE, *The Environment in Wartime: An Overview*, in THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES, *supra* note 4, at 17.

¹⁰³ U.N. CHARTER preamble.

¹⁰⁴ Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 29.

environment as well. The ICJ seemingly held that this basic interest amounts to a principle of international law.¹⁰⁵

The world's interest in the environmental effects of war relies on the underlying notion that if countries wage war, they do so responsibly. Responsibility embodies not just consideration for independent issues such as environmental protection (or even human rights) alone as the sole goal in contemplating the legalities of war. Responsibility demands understanding the ethics of war, those independent issues counter-balanced with the "principle of 'military and political necessity.'"¹⁰⁶ Notably, the ICJ turned the crux of their environmental conclusions to the aforementioned concept of ethics in war, stating:

The Court does not consider that the [environmental] treaties in question could have intended to deprive a State of the exercise of its right of self-defence under international law because of its obligations to protect the environment. Nonetheless, States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives.¹⁰⁷

Modern development on a world scale has refashioned that responsibility into a new image. As conceptualized by Christopher Stone, that new image is rooted in the advent of environmentalism juxtaposed with developments in military technology:

¹⁰⁵ "The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment." *Id.*

¹⁰⁶ CHRISTOPHER D. STONE, *The Environment in Wartime: An Overview*, in THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES, *supra* note 4, at 19.

¹⁰⁷ Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 30.

Two developments have forced us to reconsider our posture towards the environment in wartime. The first is the rise of environmentalism. The second half of the twentieth century witnessed heightened alarm over damage to the environment from all causes. The course of human development, even in peace, is taxing on our biosphere. Species are disappearing; forests are shrinking; the oceans are sullied and overfished; the atmosphere and ozone layer are subject to stresses whose implications are, if uncertain, certainly worrisome. These concerns have spurred a growth in environmental laws and activities at local, regional, and international levels.

The second development involves advances in military technology. New weaponry threatens to amplify the environmental hazards bred by economic development and population growth. The most dramatic specter is the "nuclear winter" that many scientists maintain would follow an extensive nuclear exchange. But even hostilities on a more limited scale threaten to add the environment to the casualty lists of modern warfare.¹⁰⁸

Our biosystem is interrelated so that what is executed in the name of war affects warring parties and bystanders alike. Arguably technology has exponentially surpassed previous international controls on implementation of such tools in war. Therefore, the international community needs, and to a certain degree is developing, a stronger more vocal interest in shoring up international law regarding the environment and war.

A. Argument for Environment-Altering as International Standard For Legality of a Weapon

Laws applying to distinct environment-altering weapons like nuclear weapons should be expanded to all environment-altering weapons because such systems are often conceptualized together. For example, in the 1964 debates on the question "should weapons systems be placed under international control," Lewis Bohn noted "surely it is the mass weapons—chemical,

¹⁰⁸ CHRISTOPHER D. STONE, *The Environment in Wartime: An Overview, in THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES*, *supra* note 4, at 17-18.

biological, and (above all) nuclear—which pose by far the greatest threat to our lives and all we value.”¹⁰⁹

Proposing an international standard regarding environment-altering weapons systems is not a new concept;¹¹⁰ however, any such standard would be tough to develop. Anytime there is a question of cooperation regarding arms control, especially in context of hostility, certain problems arise.¹¹¹ An arguable interest in nuclear weapons as a means of deterrence may exist, but a similar argument regarding the deterrence value of other environment-altering weapons, like biological

¹⁰⁹S. DOC. NO. 88-246, at 25 (1964) (quoting, Lewis C. Bohn, *Peace With Disarmament—or Without?*, in *DISARMAMENT, ITS POLITICS AND ECONOMICS* 49-51 (Melman & Seymore eds., 1962)).

¹¹⁰ *Id.*

¹¹¹ Any effort to cooperate on arms control within a context of hostility also poses certain special problems which are difficult to handle by explicit terms in formal agreements. For example:

- (1) Procedure for establishing violations.—A tribunal to decide on violations may be desirable, but may not be an adequate solution. The evidence may not establish the evasion, but still leave other parties uneasy, especially where distrust is so profound.
- (2) Sanctions for violation.—To prescribe the sanctions for possible violations is not feasible. Since the purpose would be to redress any resulting imbalance and to coerce compliance, effective remedies will depend on the circumstances of the violator and of the complying parties. Moreover, since self-help will be the principal sanction, the attitude of the parties themselves will be crucial. In theory, a tribunal could be given discretion to fix appropriate sanctions, but the parties will hardly agree to this in practice where their security may be at stake.
- (3) Adjustment to change.— . . . changing technology or other factors may skew the impact of the controls from what was foreseen. Some means for adjusting the terms to fit the new conditions is essential to keep the system viable. Again, it is hard to envisage any formal procedure for this purpose which would be workable.

S. Doc. No. 88-246, at 11 (1964) (original emphasis omitted) (quoting ROBERT R. BOWIE, *Arms Control and United States Foreign Policy*, in *ARMS CONTROL: ISSUES FOR THE PUBLIC* 50-51, 66-70 (Louis Henkin ed., 1961)).

weapons, is speculative, and the international treaties cited by the Advisory Opinion support expanding environmental provisions to environment-altering weapons.

1. *Environment-Altering Weapons as Having Deterrence Value is Speculative*

The ICJ rephrased the environmental issue addressed in their opinion as “whether the obligations stemming from [environmental] treaties were intended to be obligations of total restraint during military conflict” rather than “whether the treaties relating to the protection of the environment are or are not applicable during an armed conflict [at all.]”¹¹² The ICJ framed restraint in military conflict in terms of a State’s “right of self-defence.”¹¹³ Self-defense involves a variety of concepts, the least of which involves a deterrent effect.

As alluded to earlier, when considering armed conflict, a State looks to its available weapons systems and selects the appropriate implement for the military objective. A State may achieve its military objective simply by possessing a weapon that motivates its opponent to implement other weapons or to reconsider warfare at all. Some States may argue that nuclear weapons carry such deterrent effect.¹¹⁴ That position implies that weapons like nuclear weapons may likely outweigh environmental interests since they may never be employed and their mere presence precludes the gross degree of war that could be threatened if such weapons were not available. Though States may assert a logical argument that nuclear weapons include a valuable

¹¹² Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 95 (July 8) at para. 30.

¹¹³ *Id.*

¹¹⁴ “[N]onstrategic nuclear weapons ‘have contributed to the deterrence of conventional attack.’ . . . Additionally, US possession of nonstrategic nuclear weapons has helped deter enemy use of nonstrategic nuclear weapons.” RICHARD A. PAULSEN, Maj. U.S.A.F., *THE ROLE OF US NUCLEAR WEAPONS IN THE POST-COLD WAR ERA* 46 (Air University Press, 1994) (citation omitted).

deterrent effect, in general, the deterrent effect of environment-altering weapons may reasonably be characterized as speculative at best.

International law regarding warfare developed fairly early regarding the use of biological agents as weapons. The advanced stage of development in international law regarding biological and chemical weapons supports using such weapons as the quintessential example in considering the development of international law regarding environment-altering weapons. Interestingly, and perhaps in light of the long contemplated issue of biological and chemical weapons as tools of war, States seem to have rejected any deterrence effect in such weapons.

Notwithstanding international treaties directly prohibiting the use of biological agents as weapons,¹¹⁵ States have expressed their own dismay for biological agents as weapons. For example, the United States Code specifically states:

(a) IN GENERAL.—Whoever knowingly develops, produces, stockpiles, transfers, acquires, retains, or possesses any biological agent, toxin, or delivery system for use as a weapon, or knowingly assists a foreign state or any organization to do so, or attempts, threatens, or conspires to do the same, shall be fined under this title or imprisoned for life or any term of years, or both. There is extraterritorial Federal jurisdiction over an offense under this section committed by or against a national of the United States.

(b) DEFINITION.—For purposes of this section, the term “for use as a weapon” does not include the development, production, transfer, acquisition, retention, or possession of any biological agent, toxin, or delivery system for prophylactic, protective, or other peaceful purposes.¹¹⁶

¹¹⁵ See generally, Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and On Their Destruction, April 10, 1972 ____ I.L.M. ____ found at <http://projects.sipri.se/cbw/docs/bw-btwc-text.html> (last accessed October 29, 2001).—Source provided didn't provide enough information to correctly cite.

¹¹⁶ 18 U.S.C. § 175 (2000).

The United States, through its legislation, values biological agents in terms of their peaceful application. However, the United States does not consider wartime application of biological weapons to outweigh the need to protect its own people and humanity internationally from the effects of a biological or chemical attack.¹¹⁷ Where States, like the United States, do not value biological agents to deter production of similar weapons, those States are not likely to see such weapons as a viable deterrent on the battlefield.

This position, however, should not imply that biological, chemical, or other environment-altering weapons provide no military benefit. For example, “[r]ecent statements by U.S. Army officials have called for the development of gas-guzzling bacteria to curtail an enemy’s mobility.”¹¹⁸ Such a tool may prevent loss of life for both American soldiers and those aggressive toward the United States by preventing the enemy’s capability to attack or escape. Yet, today’s technology and improvements in military tactics allow military preparedness, rendering weapons like biological agents minimally effective in combat. As a result, mere possession of biological agents would only likely motivate militaries to become more prepared, rather than to rethink attack. In short, militarily speaking, environment-altering weapons alone have only speculative deterrent value.

2. The Treaties Cited By the ICJ In Its Advisory Opinion On Nuclear Weapons Support Expanding Their Application to Other Environment-Altering Weapons

¹¹⁷ “The United States is working wholeheartedly toward a world-wide ban on chemical and biological weapons.” PAULSEN, *supra* note 114, at 119.

¹¹⁸ The Sunshine Project, *The Biological Weapons Convention and the Negotiations for a Verification Protocol* (April 2000) available at www.sunshine-project.org/publications/bk2en.html. (last accessed March 22, 2002).— this quote will be checked by Mike.

The treaties recognized by the ICJ in the Advisory Opinion also support extending the opinion to environment-altering weapons. For example, under article 55 of the Additional Protocol I, the drafters limited warfare, to include reprisal, from causing “widespread, long-term and severe damage.” The drafters avoidance of enumerating specific, prohibited weaponry allows a broad reading of the article to prohibit any weapon, including environment-altering weapons, that would produce such results. Moreover, such a reading would be consistent with the treaty’s interest in protecting civilian populations.¹¹⁹

In addition, Article 51 of the Additional Protocol I protects individual civilians against the dangers of war. Specifically, paragraph 4 of article 51 prohibits indiscriminate attacks.¹²⁰ The treaty does not specifically address fallout from legitimate methods of warfare as being prohibited; however, it does prohibit weapons that contradict the treaty’s interest in civilians and environmental protection.¹²¹ Where the use of environment-altering weapons as a method of

¹¹⁹ See generally, ADDITIONAL PROTOCOL *supra* note 68, at part IV.

¹²⁰ Indiscriminate attacks are prohibited. Indiscriminate attacks are:
(a) those which are not directed at a specific military objective;
(b) those which employ a method or means of combat which cannot be directed at a specific military objective; or
(c) those which employ a method or means of combat the effects of which cannot be limited as required by this Protocol;
and consequently, in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.

Id., at art. 51, para. 4.

¹²¹ *Id.* at art. 51, para. 4, sect. (c); see generally, *Id.* at ch. II; *id.* at art. 55 (noting protection of the environment as an interest in civilian objects).

combat cannot be confined to the military objective, the environmental footprint of such weapon and its feasibility as a method of warfare may violate the treaty.¹²²

Read together, the Stockholm Declaration and Rio Declaration may also extend to environment-altering weapons. Principle 26 of the Stockholm Declaration demonstrated the parties' interest in protecting the environment from not only nuclear weapons, but also from "all other means of mass destruction."¹²³ Assuming that environment-altering weapons are included in the category of weapons of mass destruction, the Stockholm Declaration logically could extend to prohibit all such weapons as injurious to the environment. Principle 24 of the Rio Declaration similarly recognized the applicability of the laws of armed conflict, and pointed States toward international interest in the environment in light of those laws.¹²⁴ These principles may be read to authorize engagement in war, and also to encourage prioritizing the use of environment-altering weapons as a last resort. Additionally, both the Stockholm and Rio Declarations establish grounds for holding States responsible for the use of environment-altering weapons. Though the Rio and Stockholm declarations, coupled with the ICJ's opinion, may reasonably allow the wielding of those weapons when balanced against the threat to the State, empowerment would not preclude State responsibility for making reparations for that use.

There presently exists an international interest in developing definite international law in the area of biological, and similar, weapons. This interest is evident in the agreements made between the States on the subject. However, a review of the Geneva Gas Protocol of 1925 and

¹²² ADDITIONAL PROTOCOL TO THE GENEVA CONVENTION OF 1949, ART. 51, PARA. 4.

¹²³ Stockholm Declaration *supra* note 69.

¹²⁴ Rio Declaration *supra* note 70.

the Biological Weapons Convention of 1970, suggests that development of international law on environment-altering weapons must further develop to be truly effective.

The Geneva Gas Protocol of 1925 “[p]rohibits the use in war of ‘asphyxiating, poisonous or other gases and of all analogous liquids, materials or devices’”¹²⁵ At the time this protocol developed, gas delivery systems dominated technology.¹²⁶ Gas spread across the battlefield and into the environment. Since that time, technology has produced weapons systems capable of delivering such poisons in forms other than gas. Delivery systems may allow for better control and direction of those poisons.¹²⁷ Further, technology has made those systems more economically feasible than other systems, like nuclear weapons.¹²⁸ Granted, the foreclosed use of gas on the battlefield is commonly accepted internationally. Yet, arguably the protocol would have developed to preclude more than simply gas had its drafters foreseen the future development of technology. A feasible argument exists for the out dated nature of the Geneva Gas Protocol. To

¹²⁵ Absence of a Specific Authorization or Prohibition of the Threat or Use of Nuclear Weapons as Such, GENEVA GAS PROTOCOL OF 1925, at 24.

¹²⁶ David Goldberg, a chemical weapons analyst for the Army, states that “it was not until World War I that chemical science and military technology had advanced so that chemical agents could produce significant results.” The Germans and Allies employed a total of 124,000 tons of chemical agents, resulting in 1.3 million casualties, of which 91,000 died.

PAULSEN, *supra* note 114, at 118.(quoting *Global Spread of Chemical and Biological Weapons: Hearings Before the Committee on Governmental Affairs and Its Permanent Subcommittee on Investigations*, 101 Cong. 30 (1991)).

¹²⁷ “Chemical weapons are more suited for battlefield use than biological weapons are, since military personnel can control their effects and distribution to a greater degree.” PAULSEN, *supra* note 114, at 121.

¹²⁸ “[C]hemical and biological weapons are much easier to produce than nuclear weapons and have proved to be quite effective.”*Id.* at 118.

truly further the humanitarian and environmental nature of the Geneva Gas Protocol, the United Nations should reconsider the effectiveness of the document¹²⁹ and redraft it in light of modern international law.¹³⁰

The Biological Weapons Convention does not save the Geneva Gas Protocol. Superficially, the Biological Weapons Convention covers biological weapons and the Geneva Gas Protocol inherently deals with chemical-based weapon systems. However, a more in depth analysis reveals that, although the underlying issue of the rules of war characterize both the Biological Weapons Convention and the Geneva Gas Protocol, the Biological Weapons Convention targets a unique string of weapons that warrants separate classification and consideration of this international document.

¹²⁹ The Geneva Protocol has not prevented the use of chemical weapons in several conflicts. "There have been confirmed or alleged chemical agent attacks in 19 different countries in Europe, Asia, Africa, and the Middle East since World War I." The Soviets incorporated chemical warfare into their military doctrine and employed chemical weapons during the invasion of Afghanistan. "Evidence compiled by the United States State Department in 1982 showed a minimum of 47 chemical attacks in Afghanistan, causing 3,042 deaths, although Afghan sources believe the figure was much higher." The use of chemical weapons was widespread during the Iran-Iraq war. "Iran claims that in 242 attacks between January 1981-March 1988 it lost 44,000 soldiers to [chemical weapons]. . . . Between April 1987-August 1988 Iraq's Kurds claimed the Iraqi Army used [chemical weapons] against their villages at least 200 times." Additionally, use of chemical weapons by Vietnam, Angola, Mozambique, Ethiopia, and Libya have been asserted by opposing factions but thus far have not been proven.

PAULSEN, *supra* note 114, at 118-119 (citations omitted).

¹³⁰ See generally Chemical Weapons Convention (Jan. 13, 1993).

Notwithstanding the text of the Biological Weapons Convention that directly establishes restriction of biological weapons, interestingly the Biological Weapons Convention also includes environmental provisions. For example, under article I:

Each State Party to this Convention undertakes never in any circumstances to develop, produce, stockpile or otherwise acquire or retain:

- (1) Microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes;
- (2) Weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.¹³¹

The Biological Weapon Convention reflects international interests in the environment as they pertain to employment of weapons systems, but does not explicitly limit that interest to merely events of war.¹³² However, because the BWC has been ineffective, it should stand solely as a starting ground for working toward reliable restriction of environment-altering weapons. Though, “[n]o agency or country has proven that biological weapons have been used in warfare,”¹³³ sadly, the international community suspects the violations are wide-spread. In short, the convention does not achieve the control sought over the weapon systems subject to it. The

¹³¹ The Sunshine Project, *The Biological Weapons Convention and the Negotiations for Verification Protocol* (April 2000) available at www.sunshine-project.org/publications/bk2en.html. (last accessed March 22, 2002).

¹³² The Convention outlaws any biological agent that is intended for hostile application, with no limitations or exemptions. It covers agents that target humans, animals, plants or material. The [Biological and Toxin Weapons Convention] provisions are not explicitly restricted to wars, and there is no exemption for law enforcement purposes.

The Sunshine Project, *The Biological Weapons Convention and the Negotiations for Verification Protocol* (April 2000) available at www.sunshine-project.org/publications/bk2en.html. (last accessed March 22, 2002).

¹³³ PAULSEN, *supra* note 114, at 119.

Biological Weapon Convention's failing performance may rest in its lack of viable inspection processes, reliable sanctions, or even interest by the countries violating its tenets. Regardless, the U.N. should use the BWC as a starting point for addressing appropriate arms control environment-altering weapons.

VI. RECOMMENDATION: APPLYING A PROHIBITION AGAINST ENVIRONMENT-ALTERING WEAPONS IN PEACE TIME

Effects on the international environment do not cease with the conclusion of war. The effect of weapons on the environment lasts long after peace is declared, thus the use of a binding protocol in deciding when to implement environment-altering weapons is needed. The protocol should not involve just those weapons used during war, but also the testing of weapons.

A ban on environment-altering weapons should also extend beyond war to peacetime. Such a ban would not be novel in light of article I of the Nuclear Test Ban Treaty¹³⁴ made between the United States, the United Kingdom, and the Union of Soviet Socialist Republics. The treaty required those countries to:

[P]rohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control:

- (a) in the atmosphere; beyond its limits, including outer space; or underwater, including territorial waters or high seas; or
- (b) in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted. It is understood in this connection that the provisions of this subparagraph are without prejudice to the conclusion of a treaty resulting in the permanent banning of all nuclear test explosions, including all such explosions underground, the conclusion of which, as the Parties have states in the Preamble to this Treaty, they seek to achieve.¹³⁵

¹³⁴ Comprehensive Nuclear Test-Ban Treaty, S. Treaty Doc. No. 105-28 (Sept. 24, 1996).

¹³⁵ 88 Cong. 7 (1964); *see generally*, Comprehensive Nuclear Test-Ban Treaty, S. Treaty Doc. No. 105-28 (Sept. 24, 1996).

Clearly, the interest of these parties included not just a consideration for fall out from weapons employed during war time, but fall out from discharging any such weapons at any time.

In addition, arguably the Biological Weapons Convention standard may extend beyond war. For example, “[t]he Convention outlaws any biological agent that is intended for hostile application, with no limitations or exemptions . . . The [Biological Weapons Convention’s] provisions are not explicitly restricted to wars, and there is no exemption for law enforcement purposes.”¹³⁶ In short, the unlimited preclusion of biological agents indicates a restriction on such weapons beyond the battle field. Beyond these basic implications, however, the clear ban on such agents demonstrates the world’s overall intolerance for weapons of this kind. The ICJ would likely consider this intent, and broadly read this legal ban.

Though precedent does exist for extending prohibitions on weapons to peace time, if a ban on environment-altering weapons is developed, that ban should be expressly extended so as to address interests not yet contemplated under international law. As the ICJ noted in its Advisory Opinion:

The notions of ‘threat’ and ‘use’ of force under Article 2, paragraph 4, of the Charter [of the U.N.] stand together in the sense that if the use of force itself in a given case is illegal - for whatever reason - the threat to use such force will likewise be illegal. In short, if it is to be lawful, the declared readiness of a State to use force must be a use of force that is in conformity with the Charter.”¹³⁷

But article 2, paragraph 4, expressly applies to members of the United Nations. As aforementioned, international law may apply to individuals through their nationality. However,

¹³⁶ The Sunshine Project, *The Biological Weapons Convention and the Negotiations for Verification Protocol* (April 2000) available at www.sunshine-project.org/publications/bk2en.html. (last accessed March 22, 2002).

¹³⁷ Legality Of The Threat Or Use Of Nuclear Weapons, 1996 I.C.J. 95 (July 8).

with increased travel and financial means for specific terrorist groups, terrorists are abandoning their nationality and taking refuge in other countries. Arguably, international law should apply through the care-taking country to the harbored terrorist. But that connection between the terrorist and international law seems tenuous. Expressly extending a ban on environment-altering weapons to any individual implementing them in peace time, and holding them accountable for the environmental effects, would combat any ambiguity that may arise from the blurring borders between States.

V. Conclusion

In conclusion, the necessity of winning at war should not allow technology to outpace the State's objectives. Certainly, the State balances the effect of the weapons it uses or expects to meet on the battlefield with the anticipated effects on its own combatants. Such consideration facilitates military preparedness. Thus, it is not far-fetched that the State does, or should, consider the immediate and after-effects of a particular weapon on its citizens and the citizens of the world. States, such as the United States, approve of such environmental considerations as a factor both in war and in peace time military preparation.¹³⁸ That can only be achieved through a consideration of environmental provisions. In short, weighing the costs of war against the purported objectives must logically include a consideration for the environment.

¹³⁸ *Hudson River Sloop Clearater, Inc., et al. v. Department of the Navy, et al.*, 891 F.2d 414, 424 (2d Cir. 1989) (concluding that "the Navy [may not] proceed unchecked . . . [they are] still bound to consider environmental consequences [even] in any Homeport proposal [regarding stationing of nuclear weapons].").